

# REMARKS

In view of the foregoing amendments and following remarks, Applicants respectfully request reconsideration of the present application.

## **I. Status Of The Claims**

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Upon entry of entry of the foregoing amendments, claims 1-58 will be pending in the application. Claims 1-5, 7-22, 24 and 26-53 were withdrawn from consideration pursuant to 37 C.F.R. § 1.142(b). Claims 6, 23, 25 and 54 are canceled without prejudice or disclaimer. New claims 55-58 are added.

The following table identifies exemplary support for claims 55-58 in the specification and original claims.

<b>Claim</b>	<b>Language</b>	<b>Support</b>	<b>Language</b>
55	An isolated peptide	Original claim 6	A peptide
	That does not exceed 25 total amino acids in length	Page 9, lines 15-16	The Haril peptide having additional amino acid residues does not exceed 25 total amino acids in length
	Wherein, (i) said peptide contains the amino acid sequence H A R L	Page 9, lines 7-8	The invention encompasses peptides having the sequences of any regions (a), (b), (c), (d), or homologs
		Original claim 6	A peptide having the amino acid sequence H A R L
	(portion of SEQ ID NO:2, residues 292-295); and	Page 9, line 2	(d) 292-296 H H A R L I F
	(ii) additional amino acids before and after the amino acid sequence H A R L of said peptide correspond to those amino acids found in a Neural	Page 9, lines 7-8	The additional amino acid residues or linker peptides may be those found in the NTP sequence before and after the Harlil sequence

Claim	Language	Support	Language
	Thread Protein (NTP) sequence.		
		Original claim 6	additional amino acids flanking either the 3' or 5' end of the peptide
56	An isolated peptide	Original claim 6	A peptide
	That does not exceed 25 total amino acids in length	Page 9, lines 15-16	The Haril peptide having additional amino acid residues does not exceed 25 total amino acids in length
	Wherein, (i) said peptide contains the amino acid sequence H A R L	Page 9, lines 7-8	The invention encompasses peptides having the sequences of any regions (a), (b), (c), (d), or homologs
		Original claim 6	A peptide having the amino acid sequence H A R L
	(portion of SEQ ID NO:2, residues 292-295) and	Page 9, line 2	(d) 292-296 H H A R L I F
	homologs thereof;	Page 9, lines 7-8	The invention encompasses peptides having the sequences of any regions (a), (b), (c), (d), or homologs
		Page 9, lines 17-18	Homologs and variants of the Harlil peptides are also encompassed by the scope of invention
		Page 9, 17-23	Entire Paragraph
	(ii) additional amino acids before and after the amino acid sequence H A R L of said peptide correspond to those amino acids found in a Neural Thread Protein (NTP) sequence; and	Page 9, lines 7-8	The additional amino acid residues or linker peptides may be those found in the NTP sequence before and after the Harlil sequence
		Original claim 6	additional amino acids flanking either the 3' or 5' end of the peptide
	(iii) said peptide binds to a NTP.	Page 11, line 4	The Harlil sequence shows binding specificity to NTP
		Page 11, line 14	The Harlil peptides of the invention bind specifically to NTP
57	An isolated mimetic of a peptide	Page 10, line 2-5	The present invention is directed to . . . peptide mimetics, binding partners, and/or homologs as affinity

Claim	Language	Support	Language
			binging partners of NTP for assay or purification of NTP, the use of Harlil peptides, peptide mimetics, and homologs thereof
	That does not exceed 25 total amino acids in length	Page 9, lines 15-16	The Haril peptide having additional amino acid residues does not exceed 25 total amino acids in length
	Wherein, (i) said peptide contains the amino acid sequence H A R L	Page 9, lines 7-8	The invention encompasses peptides having the sequences of any regions (a), (b), (c), (d), or homologs
		Original claim 6	A peptide having the amino acid sequence HARL
	(portion of SEQ ID NO:2, residues 292-295) and	Page 9, line 2	(d) 292-296 H H A R L I F
	homologs thereof;	Page 9, lines 7-8	The invention encompasses peptides having the sequences of any regions (a), (b), (c), (d), or homologs
		Page 9, lines 17-18	Homologs and variants of the Harlil peptides are also encompassed by the scope of invention
		Page 9, 17-23	Entire Paragraph
	(ii) additional amino acids before and after the amino acid sequence H A R L of said peptide correspond to those amino acids found in a Neural Thread Protein (NTP) sequence; and	Page 9, lines 7-8	The additional amino acid residues or linker peptides may be those found in the NTP sequence before and after the Harlil sequence
		Original claim 6	additional amino acids flanking either the 3' or 5' end of the peptide
	(iii) said peptide binds to a NTP.	Page 10, line 2-5	The present invention is directed to Harlil peptides of NTP, the use of such peptides . . . and/or homologs as affinity binging partners of NTP for assay or purification of NTP
		Page 11, lines 2-17	Entire Section
58	An isolated mimetic of a peptide	Page 10, line 2-5	The present invention is directed to . . . peptide mimetics, binding partners,

Claim	Language	Support	Language
			and/or homologs as affinity binding partners of NTP for assay or purification of NTP, the use of Harlil peptides, peptide mimetics, and homologs thereof
	That does not exceed 25 total amino acids in length	Page 9, lines 15-16	The Haril peptide having additional amino acid residues does not exceed 25 total amino acids in length
	Wherein, (i) said peptide contains the amino acid sequence H A R L	Page 9, lines 7-8	The invention encompasses peptides having the sequences of any regions (a), (b), (c), (d), or homologs
		Original claim 6	A peptide having the amino acid sequence HARL
	(portion of SEQ ID NO:2, residues 91-94); and	Page 8, line 31	(b) 90-96 H H A R L C L
	(ii) additional amino acids before and after the amino acid sequence H A R L of said peptide correspond to those amino acids found in a Neural Thread Protein (NTP) sequence; and	Page 9, lines 7-8	The additional amino acid residues or linker peptides may be those found in the NTP sequence before and after the Harlil sequence
		Original claim 6	additional amino acids flanking either the 3' or 5' end of the peptide
	(iii) said peptide binds to a NTP.	Page 10, line 2-5	The present invention is directed to Harlil peptides of NTP, the use of such peptides, peptide mimetics, binding partners, and/or homologs as affinity binding partners of NTP for assay or purification of NTP, the use of Harlil peptides, peptide mimetics, and homologs thereof

Because the amendments do not introduce new matter, entry thereof by the Examiner is respectfully requested.

**II. Formal Objections To The Claims**

Claims 23, 25 and 54 were objected to as being drawn in part to nonelected subject matter. In addition, claims 23, 25 and 54 were objected to as the article “an” prior to “NTP” should be “a”.

Applicants have cancelled claims 23, 25 and 54. The new version of the claims avoids these issues. Accordingly, Applicants respectfully request withdrawal of these grounds of rejection.

**III. Provisional Double Patenting Rejection**

Claims 6, 23, 25 and 54 were provisionally rejected under the judicially-created doctrine of double patenting as being unpatentable over claim 11 of the co-pending U.S. Patent Application No. 10/146,130.

Applicants respectfully defer a response to this rejection, if it is still applicable, until such time as allowable subject matter is indicated.

**IV. Rejection Under 35 U.S.C. § 112, First Paragraph**

Claims 6, 23, 25 and 54 were rejected under 35 U.S.C. § 112, first paragraph, as containing new matter. Specifically, the Examiner alleges that the combination of length limitations, flanking amino acids corresponding to NTP and functional activity is not supported in the originally filed application. Applicants respectfully traverse.

New claims 55-58 are fully supported by the specification and claims as originally filed, as shown in the table above. Applicants specifically point out exemplary support for new claims 55-58, including, in most cases, the literal language from the application and original claims. To the extent that the combination of limitations is claimed, a study of the entire application as filed ably demonstrates that the disclosed Harlil sequences possesses each claimed characteristics. *See Table supra* and application. Accordingly, Applicants respectfully request withdrawal of this rejection.

**V. Rejection Under 35 U.S.C. § 102(b)**

Claims 6, 23, 25 and 54 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,830,670 to Monte et al. (“Monte”). The Examiner argues that, despite of the qualification of particular length limitations (no more than 21 or 25), the peptide disclosed in Monte as SEQ ID NO:120 meets the claim limitations in that the invention is claimed with “having” and “comprising” language.

Applicants submit new claims 55-58 directed to isolated peptides or mimetics of peptides that do not exceed 25 amino acids in length. This limitation is literally supported in the application as filed (see page 9, lines 15-16), and the new claims do not recite either “having” or “comprising”. Accordingly, the claimed invention is not anticipated by Monte in that SEQ ID NO:120 from that reference discloses a protein of 375 amino acids in length.

To the extent that a peptide of the claimed invention may appear in a larger context, the application provides examples which clearly demonstrate to those skilled in the art how peptides may appear. “The fundamental factual inquiry is whether the specification conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention as now claimed.” MPEP § 2163. Specifically, the application teaches Harlil sequences conjugated to maleimide activated Rabbit IgG (*see* page 16, line 21, of the application), to linker sequences (*see* page 16, line 22 to page 17, line 3), and to carrier proteins (*see* page 17, line 6, of the application). Thus, a skilled artisan would recognize, with reasonable clarity, that these disclosures provide a larger context in which the claimed polypeptides may appear. Accordingly, Applicants respectfully request withdrawal of this rejection.

**VI. Conclusion**

The present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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